

Real LifeTM

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Grants Working Group Recommendations CLIN

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CIRM
CALIFORNIA STEM CELL AGENCY

OUR MISSION

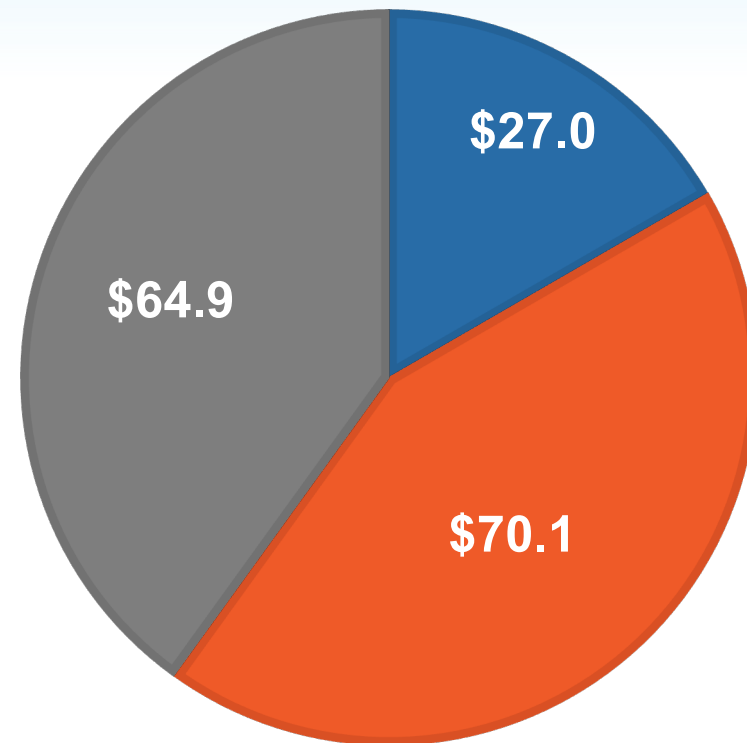
Accelerating world class science
to deliver transformative
regenerative medicine treatments
in an equitable manner to a
diverse California and world



Annual Allocation: \$162 million

- Amount Requested Today
- Approved Awards
- Unused Balance

Amounts are shown in millions



- **Score of “1”**

Exceptional merit and warrants funding.

May have minor recommendations and adjustments that do not require further review by the GWG

- **Score of “2”**

Needs improvement and does not warrant funding at this time but could be resubmitted to address areas for improvement.

GWG should provide recommendations that are achievable (i.e., “fixable changes”) or request clarification/information on key concerns.

- **Score of “3”**

*Sufficiently flawed that it does not warrant funding and the same project should not be resubmitted **for at least 6 months.***

Applications are scored by all scientific members of the GWG with no conflict.

1. Does the project hold the necessary significance and potential for impact? (i.e., what value does it offer; is it worth doing?)
2. Is the rationale sound? (i.e., does it make sense?)
3. Is the project well planned and designed?
4. Is the project feasible? (i.e., can they do it?)
5. Does the project address the needs of underserved communities?

Scientific GWG
Member



Scientific evaluation (disease area expert,
regulatory, CMC, product development)

Provides scientific score on all applications

Patient Advocate
or Nurse GWG
Member



DEI evaluation, patient perspective on significance
and potential impact, oversight on process

Provides DEI score on all applications

Provides a suggested scientific score

Scientific
Specialist
(non-voting)



Scientific evaluation (specialized expertise as
needed)

Provides initial but not final scientific score

Title	Phase 1, open label, dose escalation study of oncolytic virus (OV)-loaded cytokine induced killer (CIK) cells in patients with advanced solid tumors
Therapy	Cytokine-induced killer cells with oncolytic virus that target cancer cells
Indication	Advanced refractory solid tumors
Goal	Completion of phase 1 clinical trial to assess safety and tolerability
Funds Requested	\$7,999,689 (co-funding: \$0)

Maximum funds allowable for this category: \$8,000,000

Clinical Background: Refractory solid tumors such as colorectal, ovarian, breast, and osteosarcoma that fail to respond to standard treatments represent a significant unmet medical need.

Value Proposition of Proposed Therapy: The standard of care varies by tumor type but may involve chemotherapy, radiation, resection, and/or available drugs. If successful, the proposed therapy would provide a safe and effective therapeutic option for patients with solid tumors where approaches such as CAR-T have been less successful.

Why a stem cell or gene therapy project: Hematopoietic progenitor cells are used to manufacture the therapy.

Application/ Award	Project Stage	Project End Date	Indication	Candidate	Mechanism of Action
TRAN	Pre-IND	Jul 2022	Ovarian cancer	Neural stem cells loaded with oncolytic virus	Neural stem cells target solid tumor cells to deliver oncolytic virus.



Previous CIRM Funding to Applicant Team



Applicant has not previously received a CIRM award.

GWG Recommendation: Exceptional merit and warrants funding

Scientific Score	GWG Votes
1	14
2	1
3	0

DEI Score: 8 (scale 1-10)

CIRM Team Recommendation: Fund (concur with GWG recommendation)

CIRM Award Amount: \$ 7,999,689*

*Final award shall not exceed this amount and may be reduced contingent on CIRM's final assessment of allowable costs and activities.

Title	A Double-Blind Randomized Placebo-Controlled Investigation of Autologous Muscle Derived Progenitor Cells for the Treatment of Dysphagia
Therapy	Autologous muscle-derived progenitor cells
Indication	Dysphagia (swallowing disorder) due to head and neck cancer
Goal	Completion of a phase 1 clinical trial to assess safety
Funds Requested	\$11,015,936 (co-funding: \$2,008,800)

Maximum funds allowable for this category: \$12,000,000

Clinical Background: Treatment for head and neck cancer often results in muscle damage affecting the ability of patients to swallow (dysphagia). The disorder may cause patients to experience malnutrition, dehydration, social isolation, depression, aspiration pneumonia, and possibly death.

Value Proposition of Proposed Therapy: The current standard of care for dysphagia includes rehabilitation exercises and surgery (laryngectomy). No other treatments currently exist to effectively restore function. If successful, the proposed therapy offers patients the potential for an improvement and/or restoration of the ability to swallow.

Why a stem cell or gene therapy project: The therapeutic candidate is composed of muscle-derived progenitor cells.



CLIN2-13017: Similar CIRM Portfolio Projects



CIRM has no other active clinical stage awards targeting this disease indication.

Previous CIRM Funding to Applicant Team

Project Stage	Indication	Project Outcome	Project Duration	Award Amount	Milestones/Aims
IND-enabling	Airway stenosis	File IND to begin clinical trial	Apr 2014 – Dec 2016	\$3,181,162	M1-M8: Develop a non-human primate model to test the therapeutic candidate for feasibility safety, and effectiveness (Partially completed or not completed)

GWG Recommendation: Exceptional merit and warrants funding

Scientific Score	GWG Votes
1	15
2	0
3	0

DEI Score: 9 (scale 1-10)

CIRM Team Recommendation: Fund (concur with GWG recommendation)

CIRM Award Amount: \$ 11,015,936*

*Final award shall not exceed this amount and may be reduced contingent on CIRM's final assessment of allowable costs and activities.

Title	Phase 1/2 Study of a Neural Cell Therapy in Subjects with Drug-Resistant Unilateral Mesial Temporal Lobe Epilepsy
Therapy	Allogeneic neural cell therapy derived from hESCs
Indication	Drug-resistant unilateral mesial temporal lobe epilepsy
Goal	Completion of a phase 1 clinical trial to assess safety
Funds Requested	\$7,999,999 (co-funding: \$0)

Maximum funds allowable for this category: \$8,000,000

Clinical Background: Epilepsy affects more than 3 million people in the U.S. with approximately 143,000 to 191,000 cases of drug resistant mesial temporal lobe epilepsy.

Value Proposition of Proposed Therapy: Patients experiencing epileptic seizures are treated with anti-seizure medications but only about 44% become seizure-free. About a third of individuals with epilepsy have drug-resistant seizures. Surgical resection of the temporal lobe is an option, but many patients are not eligible or interested in such an invasive procedure. If successful, the proposed therapy offers patients a potentially safer, less invasive and more effective option to treat seizures.

Why a stem cell or gene therapy project: The therapeutic candidate is manufactured from human embryonic stem cells.



CLIN2-13355: Similar CIRM Portfolio Projects



CIRM has no other active clinical stage awards targeting this disease indication.

Previous CIRM Funding to Applicant Team

Project Stage	Indication	Project Outcome	Project Duration	Award Amount	Milestones/Aims
Translational	Mesial temporal lobe epilepsy	Achieve pre-IND meeting with FDA	Feb 2020 – Aug 2021	\$4,848,505	M1-M2: GMP compatible manufacturing development and delivery device testing (Completed on time) M3: Complete efficacy testing in epilepsy model (Completed with minor delay) M4: Conduct pre-IND meeting (Completed on time)
Discovery	Mesial temporal lobe epilepsy	Therapeutic candidate development	Mar 2018 - Jun 2019	\$1,616,536	6 milestones proposed, 5 met, 1 not met

GWG Recommendation: Exceptional merit and warrants funding

Scientific Score	GWG Votes
1	14
2	0
3	0

DEI Score: 9 (scale 1-10)

CIRM Team Recommendation: Fund (concur with GWG recommendation)

CIRM Award Amount: \$ 7,999,999*

*Final award shall not exceed this amount and may be reduced contingent on CIRM's final assessment of allowable costs and activities.